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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,758	10/17/2003	Michael T.K. Ling	FLM-5686A	1992

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EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,758

Applicant(s)

LING ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15, 16, 18-22, 24-26 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15, 16, 18-22, 24-26 and 28-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The rejections have been altered to reflect the amended claims. The objections to the specification and claims have been withdrawn based on the applicant's amendments.

Terminal Disclaimer

2. The terminal disclaimer filed on 19 December 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,652,942 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-2, 4-13, 15-16, 18-22, 24-26, and 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al. in view of Laurin et al.

5. Woo discloses a multi-layered non-PVC containing tubing structure comprising an outer layer, a tie layer, and an inner layer (abstract). The outer layer can comprise 40-99% by weight of a polypropylene copolymer having 2-6% polyethylene and 1-60% by weight of a styrene-ethylene-butylene-styrene (SEBS) thermoplastic elastomer copolymer (col. 3 lines 10-17). A second layer, the tie layer, comprises 30-60% by weight of a Hytrel copolyester, 0-20% by weight of a polypropylene copolymer having 2-6% polyethylene, 30-60% by weight of a SEBS thermoplastic elastomer, and 0-30% by

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weight of ethylene-vinyl acetate (col. 3 lines 38-49). Note that the applicant recognizes the exemplified copolyester, Hytrel 4056, as a polyester polyether block copolymer and recognizes the exemplified ethylene-vinyl acetate, UE 697, as a suitable material having the claimed vinyl acetate content. In this sense, the second layer is coaxially mounted within the first layer.

6. Regarding claim 22, it is noted that a core layer comprising a non-PVC containing polymer blend is coaxially mounted within the blended tie layer. Regarding claims 34 and 36, it is noted that the second layers are bonded to a second tubing (figures). It is the examiner's position that the process for bonding the tubing would not materially differentiate the claimed tubing from the tubing of the prior art (product-by-process claim). Therefore, the prior art teaches this bonded layer. Regarding claims 35 and 37, Woo teaches that the tubing is attached to containers made from flowable materials; thus, the reference teaches that the first layer is attached to a flowable material container (col. 4 lines 29-40).

7. Woo applies as above, teaching multi-layered tubing structures having blended components but failing to mention the claimed second polyolefin polymer or RF susceptible polymer of layer 1. Woo also does not disclose the claimed functionalized block copolymers. Laurin teaches similar blend compositions, where polypropylene polymers are blended with a second polyolefin, a dimer fatty acid polyamide or other RF susceptible polymer, and a compatibilizing block copolymer thermoplastic elastomer (col. 4 lines 1-23). The examples demonstrate the claimed amounts of components. SEBS copolymers are preferably functionalized with maleic anhydride or other polar

monomers to enhance the compatibility with polar polymers (col. 7 lines 37-50). Thus, it would have been prima facie obvious to use maleic anhydride-modified SEBS polymers in the Woo invention to enhance the compatibility of non-polar polymers with polar polymers. The additional polyolefin serves to confer flexibility and low temperature ductility to the blend, and the RF polymer imparts RF dielectric loss. Thus, it would have been prima facie obvious to use the claimed components in the layer of the Woo reference to improve flexibility, low temperature ductility, and RF dielectric loss.

8. Regarding the second layer, Woo applies as above, failing to teach the combination of a thermoplastic elastomer and a copolymer selected from the claimed Markush group. Laurin teaches blends of polyolefins and polar polymers, where both SEBS and functionalized SEBS materials are used as a compatibilizer for the polar and non-polar components (col. 7 lines 38-58). It is the examiner's position that it would have been prima facie obvious to include both the SEBS and functionalized SEBS components in the second layer of Woo in any amounts sufficient to optimize the compatibility of the polar and non-polar components.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woo et al. in view of Laurin et al. as applied above, and further in view of Strassmann.

10. Woo and Laurin apply as above, teaching multi-layered tubing structures for tubing ports but failing to teach a second blend layer coaxially mounted outside the blend layer 1. Strassmann teaches tubing port structures, where the bag is mounted coaxially onto the outside of the tubing (figures). The bags are made of the same blend

materials as the outer layers of the tubing to optimize adhesion (examples). It would have been prima facie obvious to use bags of blended materials and mount the bags onto the outer layer of the tubing to provide conventional bag structures having optimized adhesion to the tubing.

Response to Arguments

11. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

12. The prior art rejection has been altered to reflect the amended claims. The Laurin reference has been used to show the conventionality of including the additional materials in the layers of Woo.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melanie D. Bissett
Primary Examiner
Art Unit 1711